BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Estimate Cost Rs. 2500000.00

Name of Work: Detailed Estimate for the work of Construction of RO plant at yelahanka old town area in ward No-02 of Yelahanka Sub Division.

Sl No	Description of Item	Unit	No	L	B	D	Qty	Rate	Amount
	A) CIVIL WORK								
1	KSRB 2-1.1: Earth work in surface excavation in hard soil for leveling and lowering the ground manually (other than foundation of buildings, culverts, road drains and trenches of pipe line and cables) and removing the excavated stuff to a distance not exceeding 50m and lift upto 1.5m, excavated surface leveled and neatly dressed, disposed earth to be leveled after breaking of clods and neatly dressed as per specifications, Specification No KBS 2.1(a) / 2.3.1,P. No. 5/ Item No. 2.2/ PWD SR 2015-16	cum							
	levelling and lowering		1	8.00	6.00	0.40	19.20		
							19.20	**219.42**	**4213.00**
	Basic Rate	207.00							
	Area Weightage @ 6%	12.42							
	Total	**219.42**							
2	KSRB 2-2.2 : Earth work excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5m , in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m, specification, specification No. KBS 2.1(b) / 2.3.5, No. 5/ Item No. 2.4/ PWD SR 2015-16	cum							
	columns		4	1.00	1.00	1.50	6.00		
	long wall		2	7.00	0.90	1.20	15.12		
	short wall		3	3.10	0.90	1.20	10.04		
	for CLF		1	20.00	0.90	0.90	16.20		
							47.36		
	Deduction columns		4	1.00	0.90	1.20	4.32		
							43.04	**283.02**	**12182.00**
	Basic Rate	267.00							
	Area Weightage @ 6%	16.02							
	Total	**283.02**							

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
3	KSRB 100-1 Loading and unloading ofstone aggregates / sand/ kanker/ Moorum /soil KSRRB M100-1 Placing tipper at loading with front end loader dumpting turning for return trip excluding time for haulged and return trip complete as per specification item No 17.1 page 141 and KSRB M.100.4.1 costof haulage excluding loading and unloading MORTH to a distance of 4.00 K.M (Item No 17.4 Page 141 (SR 2015-16)	cum						84.01	5229
			Vide Item No. 1				62.24	85.60	5328.00
	Basic Rate for loading and unloading	68.00							
	Basic Rate for Haulage upto 4.00 k.m =1.28 X 2.20 X 4	11.26							
		79.26							
	Area Weightage @ 8%	6.34							
	Total	85.60							
4	KSRB-4-1.3 : Providing and laying in position plain cement concrete of mix M7.5 withOPC cement at 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregates @0.57cum machine mixed, concrete laid in layers not, exceeding 15cms, thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications Specification No. KBS 4.1,4.2, No. 12/ Item No. 4.3/ PWD SR 2015-16	Cum							
	columns		4	1.00	1.00	0.10	0.40		
	long wall		2	7.00	0.90	0.10	1.26		
	short wall		3	3.10	0.90	0.10	0.84		
	for CLF		1	20.00	0.90	0.10	1.80		
	inside		1	7.00	4.00	0.10	2.80		
	flatform		1	2.00	9.00	0.10	1.80		
							8.90		
	Deduction columns		4	1.00	0.90	0.10	0.36		
							8.54	4976.70	42486.00
	Basic Rate	4695.00							
	Area Weightage @ 6%	281.70							
	Total	4976.70							

Sl	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
3	KSRRB M300-53: construction of embankment with approved material gravel/murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement table 300-2 complete as per specifications. (which includes cost of gravel/murrum, watering charges & compaction by vibratory roller) MORTH specification Page No. 305.4.3, No. 144/ Item No. 19.60/ PWD SR 2014-15	cum							
			1	7.00	6.00	0.90	37.80		11540
							37.80	311.04	11757.00
	Basic Rate	288.00						305.28	
	Area Weightage @ 8%	23.04		17.28					
	Total	311.04		305.28					
5	KSRB 4.2.2 Providing and laying in position plain cement concrete of mix M20 withOPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregates @0.459cum with superplastesisre @ 3lts conforming to IS9103-1999Reffirmed machine mixed exceeding 15cms thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, staircase, lintels, retaining walls, return walls, walls(any thickness) including attached plasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc, including cost of all materials, labour HOM of machinery, curing, complete as per specifications. Specification No. KBS 4.1.4.6, No. KBS 4.1.4.6, No. 13/ Item No. 4.11/ PWD SR 2014-15	Cum							
	columns		4	0.30	0.30	5.50	1.98		
	footings		4	1.00	1.00	0.60	2.40		
	plinth beam		2	7.00	0.45	0.20	1.26		
			3	4.00	0.45	0.20	1.08		
	lintel		2	3.70	0.20	0.20	0.30		
			2	4.00	0.20	0.20	0.32		
	for chajja		2	0.60	0.60	0.075	0.05		
			1	4.00	0.60	0.075	0.18		
	for slabs		1	2.80	2.50	0.23	1.61		
	for CLF		1	20.00	0.45	0.15	1.35		
	inside		1	7.00	4.00	0.05	1.40		
	flat form		1	2.00	9.00	0.10	1.80		
			1	3.00	1.50	0.23	1.04		
							14.77	6083.34	89821.00

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	Basic Rate	5739.00							
	Area Weightage @ 6%	344.34							
	Total	6083.34							
6	KSRB 5.2.3 Providing and constructing granite / trap / basalt rubble stone masonry in foundation with cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications.KBS 5.1.13 Page No. 23/ Item No. 5.6/ PWD SR 2015-16	Cum							
	long walls		2	7.90	0.75	0.40	4.74		
	short wall		3	3.10	0.75	0.40	2.79		
			2	7.60	0.60	0.40	3.65		
			3	3.40	0.60	0.40	2.45		
	for CLF		1	20.00	0.75	0.40	6.00		
			1	20.00	0.60	0.40	4.80		
							24.43	4058.74	99139.00
	Basic Rate	3829.00							
	Area Weightage @ 6%	229.74							
	Total	4058.74							
7	KSRB 5.3-3 Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6 edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications KBS 5-1.13 Page No. 26/ Item No. 5.9/ PWD SR 2015-16	Cum							
	long walls		2	7.45	0.45	0.60	4.02		
	short wall		3	3.55	0.45	0.60	2.88		
	for CLF		1	20.00	0.45	0.40	3.60		
							10.50	4814.52	50545.00
	Basic Rate	4542.00							
	Area Weightage @ 6%	272.52							
	Total	4814.52							
8	Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20 mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. Page No. ~~122~~ 112/ Item No. 15.1 PWD SR 2015-16	sqm							
	long walls		2	7.45		0.600	8.94		
	short wall		3	3.55		0.600	6.39		
	for CLF		1	20.00		0.600	12.00		
							27.33	97.52	2665.00
	Basic Rate	92.00							
	Area Weightage @ 6%	5.52							
	Total	97.52							

Sl	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
9	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20cms, in depth, compacting each deposited layers by ramming after watering with lead upto 50m, and lift upto 1.5m, including cost of all labour complete as per specifications, specification. No. KBS 2.9, No. 6/ Item No. 2.10/ PWD SR 2015-16	Cum							
			1	7.00	4.00	0.600	16.80		
							16.80	127.20	2137.00
	Basic Rate	120.00							
	Area Weightage @ 6%	7.20							
	Total	127.20							
10	KSRB 4-6.7 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for sides and soffits of beams, beam haunchings, cantilever girders, bressumers and lintels not exceeding 1 m in depth including cost of all materials, labour complete as per specifications. Specification NO KBS 4.6.2 Page No. 17/ Item No. 4.34/ PWD SR 2015-16	sqm							
	for columns	4x4	16	0.45		6.000	43.20		
	plinth beam	2x2	4	7.00		0.200	5.60		
		3x2	6	4.00		0.200	4.80		
	lintel	2x2	4	3.70		0.200	2.96		
		2x2	4	4.00		0.200	3.20		
	for CLF	1x2	2	20.00		0.200	8.00		
							67.76	265.00	17956.00
	Basic Rate	250.00							
	Area Weightage @ 6%	15.00							
	Total	265.00							
11	KSRB 4-6.10 : Providing and removing centering, shuttering, strutting, propping etc., for chajjas, corbels etc., including edges including cost of all materials, labour complete as per specifications. Specification NO KBS 4.6.2 Page No. 16/ Item No. 4.37/ PWD SR 2015-16	sqm							
	for chajja		1	4.00		0.600	2.40		
			2	0.60		0.600	0.72		
							3.12	278.78	870.00
	Basic Rate	263.00							
	Area Weightage @ 6%	15.78							
	Total	278.78							

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
12	KSRB 5-14 : Providing and constructing precast concrete solid blocks with compressive strength not les than 35 Kg/sqm with cement mortar 1:4 masonry (quoin, Jamb, closer blocks) with solid concrete blocks of size 40x20x20 cms conforming to I.S: 2185/1965 in superstructure including cost of materials, labour charges, scaffolding, curing complete as per specifications. Page No. 25/ Item No. 5.27/ PWD SR 2015-16	sqm							
	walls		2	3.70		4.00	29.60		
			1	4.00		4.00	16.00		
							45.60		
	deduction Ventilator		2	0.60		0.60	0.72		
							0.72		
							44.88	999.58	44861.00
	Basic Rate	943.00							
	Area Weightage @ 6%	56.58							
	Total	999.58							
13	KSRB 4.9.2 providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost pf materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3 Page No. 17/ Item No. 4.46/ PWD SR 2015-16 Fe500	Quintal		9.18				6851.31	
	90kg/cum		0.900	9.18			8.26		
		6463.5					8.26	7051.00	58255.00
	Basic Rate	6528.70							
	Area Weightage @ 6%	522.30							
	Total	7051.00							
14	KSRB 15.3.1 : Providing 12mm thick cement plaster in single coat with cement mortar 1:6, to brick masonry including rounding off corners wherever reuired smooth rendering, : Providing and removing scaffolding, including cost of materials, labour. Curing complete as per specifications. Page No. 122/ Item No. 15.11/ PWD SR 2015-16	sqm							
	internal and external plastering	2x2	4	3.50		4.00	56.00		
			1	2.00		4.00	8.00		

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
							64.00		
	deduction Ventilator	2x2	4	0.60		0.60	1.44		
							1.44		
							62.56	151.58	9483.00
	Basic Rate	143.00							
	Area Weightage @ 6%	8.58							
	Total	151.58							
16	FIXTURES for doors and windows Page No XIV SR 2015-16								
	VENTILATORS								
	Hinges 5" heavyduty	Each	1	4			4	37.00	148
	bottom lock nail	Each	2	5			10	47.00	470
	MS Clamps	Each	2	4			8	38.00	304
	Brass screws 25mm	Each	10	5			50	2.10	105
17	Providing and fixing single shutter glass door of 12mm thick plain Toughened glass (Saint Gobain,Modi float).The door is fixed by using any approved make hardware fitting like patch fitting, pivot,Floor machine, locking arrangements and suitable SS door rails withFloral glass etching for 1/3 portion of door area etc complete. The rate includes cost of all materials, labour, hire of tools & machineries, and as per specification Page No.~~308~~ 311 Item No. 39 5 / PWD SR 2015-16	sqm							
			1	4.00		3.50	14.00		
							14.00	12084.00	169176.00
	Basic Rate	11400.00							
	Area Weightage @ 6%	684.00							
	Total	12084.00							
18	KSRB 14.13 1 : Providing precast chequered mosaic tiles dark shade using ordinary grey cement for steps and flooring, with precast 20mm thick, using marble chips of approved colour 7 to 10 nominal size laid in floors, steps and landings on a bed of 12mm thick cement mortar 1:6, mix, jointed with neat cement slurry mix with pigment to match the shade of tiles curing, rubbing, polishing , oxalic acid wash, wax polish, including cost of materials, labour, HOM machinery complete as per specifications. Page No.102/ Item No. 14.28 PWD SR 2015-16	sqm							
			1	4.00		2.50	10.00		
							10.00	982.62	9826.00
	Basic Rate	927.00							
	Area Weightage @ 6%	55.62							
	Total	982.62							

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
19	Providing and laying flooring using pre polishing water cut/gang saw 19 mm thick Granite slab over existing cement concrete bed in CM 1:4 at 20mm thick (average) pointed with white cement/ colour pigment etc., complete. Page No. 104/ Item No. 14.47.2 / black granite PWD SR 2015-16 of width not less than 900mm	sqm							
			2	4.00		0.60	4.80		
							4.80	2364.86	11351.00
	Basic Rate	2231.00							
	Area Weightage @ 6%	133.86							
	Total	2364.86							
20	Providing and fixing Special make glazed Vitrified tiles (Granomite finis) of approved make, quality and colour of sized 6000x600x10mm thick fixed on existing flooring wit ha special roffe adhesive for flooring and skirting etc., complete including providing spears at required interval and removing stains etc., complete. Page No. 104/ Item No. 14.44 / PWD SR 2015-16	sqm							
			1	3.70		4.00	14.80		
							14.80	1087.56	16096.00
	Basic Rate	1026.00							
	Area Weightage @ 6%	61.56							
	Total	1087.56							
21	KSRB 15-17.2 Applying priming coat over new wood surface and / or wood based surface after brushing with wood primer pink paint including preparing the surface after thoroughly cleaning oil, grease, dirt, and foreign matter, sand papering and knotting ready mix paint including cost of materials, labour, complete as per specifications. Page No. 114/ Item No. 15.56 / PWD SR 2015-16	sqm							
	doors	1x2	2	4.00		4.00	32.00		
	window	2x2	4	0.60		0.60	1.44		
							33.44	36.04	1205.00
	Basic Rate	34.00							
	Area Weightage @ 6%	2.04							
	Total	36.04							

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
22	KSRB 15-17.6: Providing and applying painting two coats (excluding priming coat) on new wood surface and / or wood based surface with enamel paint to give an even shade, cleaning the surface of all dirt, dust and foreign matter, sand papering including cost of materials, labour, complete as per specifications. Page No.~~115~~ 118 / Item No. 15.60.1 / PWD SR 2015-16								
		qty same as item no					33.44		
							33.44	**85.86**	**2871.00**
	Basic Rate	81.00							
	Area Weightage @ 6%	4.86							
	Total	**85.86**							
23	KSRB 15.15.1: Providing and applying painting in two coats with plastic emulsion paint of approved brand on wall surface to give an even approved shade after thoroughly brushing the surface free from mortar drops and other foreign matter including preparing the surface even and sand paper smooth cost of materials, labour, complete as per specifications. with primer. Page No.113/ Item No. 15.51.2 / PWD SR 2015-16	**sqm**							
		qty same as item no					33.44		
							33.44	**90.10**	**3013.00**
	Basic Rate	85.00							
	Area Weightage @ 6%	5.10							
	Total	**90.10**							
24	KSRB 15-16 : Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to given an even shade after thoroughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications. with primer,page No.114 item No.15.53.2/PWD SR 2015-16								
		qty same as wall plastering					14.00		
							14.00	**83.74**	**1172.00**
	Basic Rate	79.00							
	Area Weightage @ 6%	4.74							
	Total	**83.74**							

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
25	Supplying and fixing M.S rectangular poles made out of 2 equal angles of 65x656 mm welded together and fixed in CC (1:2:4) with 2 NOS 16 mm dia, M.S hold fast rods each of length 25 cms, including cost of all materials cutting, bending scaffolding wherever necessary, nicely finishing the welded joints with all lead lifts and as per the directions of the Engineer in charge of the work and including providing 2 coats of approved quality paint over one coat of shop painting (excluding cost of earthwork and concrete), No. 262/ Item No. 37.2 PWD SR 2015-16	Rmt							
	CLF		10	2.00			20.00		
							20.00	991.44	19829.00
	Basic Rate	918.00						973.08	19462
	Area Weightage @ 6%	73.44	55.08						
	Total	991.44	973.08						
26	Providing and fixing M.S. Block pipe of 38 mm dia, of heavy guage of 14 including removing the bends, cutting the pipe, and fixing pipe in between the two vertical poles (M.S rectangular poles) and spot welding the chain link with M.S. block pipe including cost of all materials wastage in cutting, and scaffolding wherever necessary with all lead and lift as directed by the engineer in charge of work etc, complete including two coats of approved quality paint over one coat of shop paint, No. 265 Item No. 37.4 PWD SR 2015-16	Rmt							
	CLF		2	20.00			40.00		
							40.00	338.04	13522.00
	Basic Rate	313.00						331.78	13271
	Area Weightage @ 6%	25.04	18.78						
	Total	338.04	331.78						
27	Providing chain link fencing 50 mm size of 8 guage properly stretched between rectangular poles and fixed with suitable bolts & nuts, the free ends shall bed welded to the pole and block pipe at top and bottom as required including cost of all materials, labour, lead and lifts and as per the directions of the engineer – in charge of work including two coats of approved quality paint over one coat of shop paint, No. 265/ Item No. 37.3 PWD SR 2015-16	Sqm							
	CLF		1	20.00		1.50	30.00		

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
							30.00	697.68	20930.00
	Basic Rate	646.00						684.76	20543
	Area Weightage @ 8%	51.68	38.76						
	Total	697.68	684.76						
28	POP Sheets corogated roof Sheets nut bolts including labour charges etc complete	Sqm							
			1	4.20		4.00	16.80	MR.	
							16.80	4500.00	75600.00
29	G.I. Roof sheets fixing and complete including labour charges	Sqm							
			1	4.50		3.00	13.50	MR	
							13.50	600.00	8100.00
30	Steel Pre fabricates structure with a 14 Guage (3)" each 60 kg including cutting and transportation complete	kgs							
			8	50.00			400.00	MR.	
							400.00	95.00	38000.00
								A) TOTAL	843416.00
	B) Electrification,wiring and lighting etc to RO Plant at ~~Mavallipura~~								
1 P.No-5 I.No-2.3	Point wiring using Copper wire with switch. Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using 1100V grade, COPPER conductor flexible multistrand FRLS PVC insulated, 2X1.5Sq.mm Cable confirming to the GTP without switch, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block complete for each outlet. GROUP A. Rupa Electrical SR for 2014-15								
	2.3.1) Short point upto 3Mtr from tapping point to out let via switch box	Point	2				2.00	144 174.00	288 348.00
	2.3.2) Medium point above 3Mtr upto 6Mtr from tapping point to out let via switch box	Point	2				2.00	215 245.00	430 490.00
	2.3.3) Long point above 6Mtr upto 10Mtr from tapping point to out let via switch box	Point	2				2.00	334 363.00	668 726.00
2 P.No-02 I.No-1.1	Open Conduit System Supplying heavy gauge PVC conduit pipe .....dia .....mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall / stone structure or rawl plugs in case of brick walls and cement plastering the damaged portion using heavy gauge saddles at an interval of 700mm using NF screws.1.1.1) 19/20mm dia 2mm thick	mtr	20				20.00	54.00	1080 1080.00

Sl	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
9 P.No 55 I.No-7.1	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 12? mm dia	No	1				1.00	2727.00	2727.00
10 P.No 44 I.No-6.7	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers. 6.7.1) 16Amps	Each	1				1.00	120.00	120.00
11 16/3	Supply patty type fluorescent tube light fitting of 4'-36/40 watts fluorescent tube fitting, made out of M.S sheet and stove enameled with low loss open construction copper wound ferromagnetic ballast, starter, locking type brass contact holders mounted on double fold type sheet base fully wired for use on230 Volts A C Supply including 1No 4'-36/40 Watts fluorescent tube. c) Group 'C' KPWD SR (Ele) 2010-11	Each	5				5.00	340.00	1700.00
12 P.No-[illegible] I.No-17.7	Fixing all types and all capacities of fluorescent / false ceiling / spot light / CFL / LED fittings indoor on the wall / ceiling / rafters / girders using 23/0.0076" twin twisted PVC insulated wires, required Nos of round blocks and clamps. 17.7.1) On wall / ceiling / Rafter / Girders	Each	5				5.00	98.00	490.00
13 65/1	SHORT POLES: (whereas clearance between Messenger wire and ground is inadequate) a) Supplying and fixing 40mm diat 2.90 thick GI pipe 1.8m long complete with atleast 2 GI pipe 1.8m, long complete with atleast 2 Nos of through bolts 12 mm dia with MS back plate 100x100x6mm dia with eye bolt fixed at top deadeninding messenger wire with masonary patch work etc , complete as per approved drawing (for single phase installations) PWD SR 2007-08	Each	1				1.00	525.00	525.00

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
14 65/5	INSULATED CABLE ON MESSENGER WIRE Using 2 single core wires for a single phase and 4 single core wires for 3 phase. Supplying and stringing PVC insulated and PVC sheathed 650/1100V class aluminium conductor of size supported by 3.15mm (10 SWG) GI messenger wire with two break insulators one at each end of the span with suspenders at intervals of 0.75m. Each suspender shall be of porcelain reel insulator of suitable core through which insulated wire passes(single core or twin core as the case may be) and this reel insulator shall be fixed to the messenger wire using 2mm (No.14SWG) GI wire suitably bent and twisted. Separate reely insulator shall be provided for each wire, the messenger wire shall be ded-ended on the clamp provided to the departmental pole wide item No.4 above.(Page No.56 item No.5 a)Single Phase using 2 Wire e) 16 Sqmm	R mtr	55				55.00	85.00	4675.00
	BESCOM DEPOSIT CHARGE								11886 7031.00
							B) TOTAL		30000.00

C) 10000LPD R. O Plant Quotation

RAW WATER PUMP :	
Quantity	1 No.
Type	Centrifugal mono block
MOC & Make	UKL
Motor Rating	0.75 HP
PRESSURE SAND FILTER :	
Quantity	1 No.
Capacity	1000 LPH
MOC & Make of housing	UKL
MOC & Make of cartridge	UKL
Capacity	1000 LPH
MOC & Make of vessel	UKL
Diameter	400 mm
Type of Valve	Single - multiport
Media	Support bed + sand
MICRON CARTRIDGE FILTER :	
Quantity	1 set
Filter Rating	5 microns
Size	20" long
ANTISCALANT DOSING PUMPS :	
Quantity	1 No.
Type	Electro - magnetic
Capacity	1.5 LPH @ 4 Bar
Dosing Tank	HDPE - 50 ltr

Enclose copy approved quotation

Sl	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	HIGH PRESSURE PUMP :								
	Quantity	1 No.,							
	Capacity	1700 LPH							
	Type of Pump	Vertical Multistage Centrifugal Pump							
	MOC	SS 304							
	Motor Rating	2 HP, 3 Phase							
	Maximum Pressure	12 kg / cm2							
	Make	UKL							
	RESERVE OSMOSIS SYSTEM :								
	Quantity	1 No.							
	Capacity	1000 LPH							
	Module Type								
	Membrane Specifications {Polyamide}								
	Make of Membrane	UKL							
	No. of Membranes								
	UV STERILISER								
	Max. Treatment Flow	1 m3/hr							
	No. of Lamps	1 No.							
	Wattage	39W							
	Efficiency	99.99%							
	Material of construction	SS 304							
	PRODUCT WATER QUALITY :								
	Appearance	Crystal Clear							
	Abide by the ISO standards	Yes							
	S S Tank : 304 grade with 16 gauge 2000 Liters capacity								
	304 grade 10 gauge SS Pipe{with steam valve} 25 ft								
	COIN BOOTH DISPENSING UNIT								
	for 5 liters & 20ltrs separately								
	Raw Water Storage Tank	Function – For storage of raw water							
	Type/ MOC	Two/Three Layered PE tanks white / transparent in color made from virgin material of Food Grade Quality, suitable for the purpose of providing Storage drinking / potable water. 5000liters capacity.							
	BBMP Approved Rate		1	946000.00					
	D) Quotation for Annual Maintenance contract for 10000 LPD Reverse Osmosis Water Plant.							**C) TOTAL**	946000.00
1	Antiscalent	20Lts	12No						
2	Sediment filters	20"X5"	12 No						
3	CTO	20"X2"	12 No						
4	G A C	2mm	200kg						
5	Sand Media	150 kg	2 times(250)kg						
6	Membrane	40X40 M	4 No						

Enclose approved copy

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
7	Water test report and submmision charges every month	Every month	12						
	BBMP Approved Rate		1	123003.00			D) TOTAL		123003.00
	Enclose approved copy								
	E) DRILLING OF BOREWELL								
1	Geophysical investigation of site for sinking borewell for supplying drinking water to the habitation either through the hand pump, MWS or P.W.S.S. by vertical electrical sounding by adopting venner or schlumbergers's method, including reconnaissance survey of geological formation, Geological investigation of existing ground water in vicinity, its quality, quantity & acceptability of the users indicating the location of site, recommended depth of casing pipe required to seal the top unconsolidated formation including an extra depth of 1.0 mtr in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instrument and accessories to work site, engaging technical personal and labour required etc (P.NO-47, I.NO-9.4, PRED 12-13 SR)	Nos	1				1	1882.00	1882.00
	Basic Rate	1882.00							
	Total	1882.00							
2	Sinking of borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above 900 CMF & above in all strata including over budern upto 20 m. fixing of casing pipes, collars & cap with necessary cutting, threading & welding including transportation of rig and supporting vehicle, crew charges & cost of consumables etc., complete including yield testing at the final depth with minimum working of compressor for one hour(excluding cost of casing pipes, collars, cap etc.,) (P.NO-47, I.NO-9.1, PRED 12-13 SR)	Rmt							
	0.00 to 50.00 Mtr.		1	50.00			50.00	315.18	15759.00
	50.00 to 100.00 Mtr.		1	50.00			50.00	412.00	20600.00
	100.00 to 150.00 Mtr.		1	50.00			50.00	458.35	22917.50
	150.00 to 200.00 Mtr.		1	50.00			50.00	484.10	24205.00
	200.00 to 250.00 Mtr.		1	50.00			50.00	560.32	28016.00
	250.00 to 275.00 Mtr.		1	25.00			25.00	600.49	15012.25
	Basic Rate	306.00							
	3% area weightage	9.18							

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	Total	**315.18**							
3	Supplying of ISI Mark 175 mm nominal bore medium black ERW casing pipe of 5mm thick black electric resistance continous welded midle steel tube material confirming to IS 1387/1993 and manufactured from hot rolled steel skelp/stripes in random length of 4 to 7 mtr both ends threaded confirming to IS 554/1985 one end(including of all taxes) (P.NO-III, I.NO-84, PRED 12-13 SR)	Rmt						1325	79500
			1	60.00			60.00	1364.75	81885.00
	Basic Rate	1325.00							
	3% area weightage	39.75							
	Total	**1364.75**							
4	Providing and fixing 250mm dia PVC 6 kg/sqcm pressure pipe including jointing and labur charges for laying pipes and as per specification and directions. (BWSSB SR 13-14, P.No 45 I.no 1 of sl.no.11.)	Each							
			1	18.00			18.00	1133.00	20394.00
	Basic Rate	1100.00							
	3% area weightage	33.00							
	Total	**1133.00**							
5	175 mm dia M.S. Casing cap (P.NO-III, I.NO-85, PRED 12-13 SR)	Each							
			1				1.00	100.00	100.00
	Basic Rate	100.00							
6	M.S. Casing pipe collars 'C' Class (P.NO-III, I.NO-86, PRED 12-13 SR)	Each							
			1	15.00			15.00	150.00	2250.00
	Basic Rate	150.00							

Specification to be taken from 2012-13 PRED SR page No. 111 Sl.No. 84

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
7	Supply & delivery at site brand new texmo/innoval/lubi/sabar /Atalanta/calamal/ waterman/Radha make suitable HP deep well submercible pumpset suitable for vertical installation in 150 dia borewells compressing of single stage or multistage CF pump close coupled by means of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water squirrel cagesubmercible induction motor suitable for operation of 3Ph, 50Hz 380/440 volts AC supply fitted with required accessories such as suction, casing, suction strainers, sand guard. Non return valve etc Complete the pump and motor shall from an integral unit with all the required fittings 15.000 HP 30 stage (P.NO-XXXXIII, I.NO-33, PWD SR ~~13-14~~ 12-13) kirloscar pumps	set							
			1				1.00	70600.00	70600.00
	Basic Rate	70600.00							
8	Providing, GI pipes confirming to IS specification of approved make with fittings such as collars bends elbows tees nipples plugs with cuts threads using white lead & threads for joints wherever necessary as per direction including all lead & lift etc,. complete 'A' grade(excluding cost of fittings)b50mm dia GI pipe (SR 13-16 PWD Page No XVII code No 509, 0154)	Rmtr							
			1	240.00			240.00	321	
							240.00	330.63	79351.20
	Basic Rate	321.00							
	3% area weightage	9.63							
	Total	330.63							
9	Providing & fixing socket GI (heavy duty collar) (Pwd SR pg xxxviii) SR 2015-16	No							
			1	55.00			55.00	84.80	4664.00
	Basic Rate	84.80							
10	Supplying and drawing 3 core PVC Sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper conductor confirming to table 3 class 5 of IS: 8130-1984 and virgin grade PVC insulation and sheathed suitable for working voltage upto 1100 volts 4 sqmm of 56 strands 0.3mm dia (P.NO-535, I.NO-30 (c), BWSSB 12-13 SR) Group B	Mtr							
			1	485.00			485.00	164.29	79678.23

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	Basic Rate	159.50							
	3% area weightage	4.79							
	Total	164.29							
11	Supplying & delivery at site brand new / Essen / Lotus sunsines/Adarsh/ Gk controls best indigenous make combine energy meter-cum-control panel board unit of size 1200 x 600 x 300 mm minimum mechanically strong and vermin and water proof the unit shall have two detachable doors suitable for operation on 3ph, 50Hz, 380/440 volts, AC supply with spring loaded latch locking with a key nbs should be provided inside the door , canopy apron and louvers ventilators shall be provided the combine energy mtr cum control panel board unit suitable for operation on 3ph, 50Hz, 380/440 AC supply shall be consisted etc,. completed T panel board shall be fabricated on single unit in the above components panel board for suitable pumpset above components panel board for suitable pumpset above 6.50 HP to 15.00 HP with star delta starter (MR)	no						MR	
			1				1.00	10000.00	10000.00
12	Fabricating supplying and mounting MS box of 16 SWG suitable for floor / wall mounting, fully weather proof with provision for better hear description, (providing with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished 2 coats of red oxide primes paint and finally finished with approved colour enamelled metal paint etc,. complete box of 21600 sq cm (P.NO-530, I.NO-39 b, BWSSB SR 13-14)	Sqm Cm							
			1	1100.00	20.00		22000.00		
	Basic Rate	0.33					22000.00	0.34	7477.80
	3% area weightage	0.01							
	Total	0.34							
13	Providing & Fixing of clamps set and borewell cap to the pump .	No's						MR	
			1				1.00	450.00	450.00
14	Supplying & delivery of brand new best make non return valve of size 50mm as per IS: 778/84 with latest amendments with ISI mark (50mm Gate wheel Valve.) (PWD SR 15-16 P.NO.XXIV, Sl.no, 673)	No's							
			1	3.00			3.00	1600.00	4800.00
	Basic Rate	1600.00							

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
15	Supplying and delivery of brand new best make ~~Gate~~ Non return Valve of size 50mm as per IS: 778/84 with latest amendments with ISI mark . 50mm ~~Gate~~ Non return Valve for distributer pipeline. 50mm dia (PWD SR 13-16 P.NO.XXIV, Sl no, 659)	No's							
			1	3.00			3.00	1145.00	3435.00
	Basic Rate	1145.00							
16	Providing and fixing of 50mm GI bend to motor (PWD SR 13-16 P.NO.XXXVIII GI FITTINGS TABLE)	No's							
			1	3.00			3.00	219.00	657.00
	Basic Rate	219.00							
17	Providing and fixing of 50mm GI Nipple to motor (PWD SR 13-16 P.NO.XXXVIII GI FITTINGS TABLE)	No's							
			1	3.00			3.00	104.30	312.90
	Basic Rate	104.30							
18	Providing and fixing of 50mm GI union to the motor ((PWD SR 13-16, P.NO.XXXVIII GI FITTINGS TABLE)	No's							
			1	3.00			3.00	223.70	671.10
	Basic Rate	223.70							
20	Labour charges for erection of new /repaired submersible pumpset along with GI pipes (32/50mm) cable (new submersible pumpset if required will be supplied by the department free of cost and released pump set should be handed over to department) including transportation (each length = 6.00m) (P.No - 564, I.No - 3, BWSSB SR 13-14)	Per length							
			1	52.00			52.00	90.64	4713.28
	Basic Rate	88.00	Nos						
	3% area weightage	2.64	Nos						
	Total	**90.64**	**Nos**						
21	Erection of combined panel board meter board with all necessary materials and labour including providing CC 1:3:6 foundation bed etc,. Complete for basement out door type. (MR)	No's							
			1	1.00			1.00	475.00	475.00

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
22	Supplying and fixing miniature circuit breakers/isolators in existing MCB distribution boards using necessary fixing materials and wiring complete as required, 40 to 63 Amps DP (P.NO - 526, I.NO - 13D (a), BWSSB SR 13-14)	No's							
			1	1.00			1.00	906.40	906.40
	Basic Rate	880.00							
	3% area weightage	26.40							
	Total	**906.40**							
23	Supplying and laying of L.T.U.G Cable having aluminiumconductor PVC insulated shethed galvanised steel wire/ steel tape armoured cable with PVC outer sheathing 1.1 KV class 4 core 16 sqmm cable (confirming to IS 1554) (P.NO - 553, I.NO - 10 (d), BWSSB SR 13-14)	Mtr							
			1	35.00			35.00	169.95	5948.25
	Basic Rate	165.00							
	3% area weightage	4.95							
	Total	**169.95**							
24	Digging of trenches of 0.6mm x 0.50 Mtrs wide refilling the trench to the required ground level and consolidating etc,. Complete sutting road surfaces (P.NO - 554, I.NO - 12 (b), BWSSB SR 13-14) in hard soil	Mtr							
			1	35.00			35.00	56.65	1982.75
	Basic Rate	55.00							
	3% area weightage	1.65							
	Total	**56.65**							
25	Supplying and fixing Class-A GI Pipe on pole/ wall/drain crossing with necessary clamping arrangements for UG Cable of 1.1 KV class 40mm (P.NO - 555, I.NO - 15 (b), BWSSB SR 13-14)	Mtr							
			1	3.00			3.00	294.58	883.74
	Basic Rate	286.00							
	3% area weightage	8.58							
	Total	**294.58**							

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
26	Supplying and fixing wiring earth electrode for grounding conduits, IC cutouts and other equipments on the meter board using 40mm dia 2.90 mm thick GI pipe 2.5 mtr long buried in a pit,/ the pit should be filled with equal proportion of salt and charocal 150 mm alround the pipe to complete depth the connections from the pipe to the conduit etc,. is to be established though GI wire of size as per ISI specification 7.3.3 of ISI 732 using 12mm dia boalts, nuts washers and checknuts etc,. the pipe shall have 16 through holes of 122mm dia (P.NO - 552, I.NO - 7 , BWSSB SR 13-14)	No's							
			1				1.00	1699.50	1699.50
	Basic Rate	1650.00							
	3% area weightage	49.50							
	Total	1699.50							
27	Supply and fixing LT cast iron pot heads suitable for 1.1 KV class 16 sqmmUG cable filled with necessary bitumen/ insulating compound complete with terminals, clamps, bolts nuts and washers etc, (P.NO - 555, I.NO - 16 (b) , BWSSB SR 13-14)	No's							
			1				1.00	271.92	271.92
	Basic Rate	264.00							
	3% area weightage	7.92							
	Total	271.92							
28	Supplying shunt capacitor's confirming to IS 2834, 3phase 400/440 volts grade for power factor improvement of roating machinery capacitor in KVAR rating No's. (MR)	No's							
			1				1.00	1350.00	1350.00
29	Providing and fixing Gun Metal Gate wheel valve confirming to IS specification of approved make as per direction including all lead and lift etc,. Complete. 50mm dia (P.NO - 103, I.NO - 13.79.6, PWD SR 13-16)	No's						1526.40	
		1442	1	3.00			3.00	1515.80	4547.40
	Basic Rate	1430.00							
	6% area weightage	85.80	86.4						
	Total	1515.80							
		1526.40							

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
30	Supplying and fixing of polished wood board made of not less than 15mm thick plank on both sides with planks made out on not more than 2 pieces and fixing the same to wall using tapered inverted wooden plugs screws etc., Size 20 x 20 x 2.5 inches (P.NO - 521, I.NO - 2 (f), BWSSB SR 13-14)	No's							
			1				1.00	311.58	311.58
	Basic Rate	302.50							
	3% area weightage	9.08							
	Total	**311.58**							
31	KSRB 2-1.1:Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m after breaking of clods complete as per specifications (P.NO - 5, I.NO - 2.1, PWD SR 13-14)	Cum							
	for PVC pipe		1	75.00	0.60	0.90	40.50	283.02	
		267					40.50	173.84	7040.52
	Basic Rate	164.00							
	6% area weightage	9.84	16.02						
	Total	173.84	283.02						
28	Providing and instalation at site of works P.V.C.Pipes including cost of pipes and specials and incluidng lowring into trenches, laying true to line, level and perfect linking at joints, leak proof including jointing encasing the pipe alround to a depth Not less than 15cm with grave or selected earth avalabile from the execavation Etc., Page No.12 item No.3,4,2 b PRED SR 2010-11 (6) V(a)	Rmtr							
	75 mm dia 6 KSC PVC pipe		1	25.00			25.00	157.00	2925.00
	63mm dia 6KSC		1	50.00			50.00	88.00	4400.00
33	Providing and installation at site of work 20mm GI pipes including cost of pipes and specials and labur incluidng lowering into trenches, laying ture to line, complete as per direction of Engineer in charge for public taps for motors/pipeline (P.No.90, I.No.13.11 PWD SR 13-14 XVII PWD SR for 2015-16	Mtr							
			1	30.00			30.00	193.98	6819.40

SL No. 505

34 Laying & Jointing GI Pipe 20mm dia PRED SR 2012-13 Rate 1 30.00 30 14.42 426

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	Basic Rate	~~183.00~~	137						
	6% area weightage	~~10.98~~							
	Total	~~193.98~~							
~~34~~ 35	Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m and lift upto 1.5m including cost of all labour complete as per specifications (P.NO - 6, I.NO - 2.11, PWD SR 13-14) ~~56~~	cum						76-32	
		~~72~~					40.50	~~59.36~~	2404.08
	Basic Rate	~~56.00~~							
	6% area weightage	~~3.36~~	4.32						
	Total	~~59.36~~	76-32						
									30000
~~35~~ 6	Bescom Deposit charges	No's	1				1.00	15000.00	~~15000.00~~
~~36~~ 7	water quality testing charges	LS	1				1.00	1000.00	1000.00
									556250
								TOTAL (E)	~~556797.00~~
									2495785
					GRAND TOTAL A+B+C+D+E				~~2499216.00~~
									4215
~~38~~ 8	Miscelaneous and rounding off.								~~784.00~~
								TOTAL	2500000.00
(Rupees Twenty five Lakhs Only)									

CERTIFICATE

1 The work spot has been inspected and the work is found necessary.

2 The Estimate is prepared as per the PRED SR 2015-16and PW,P & IWTD SR 2013-14 and BWSSB Electrical SR 2013-14

3 The provisions were made in this estimate are necessary and adequate.

4 This works come under B.B.M.P. limits.

Ramanjeeva
Assistant Engineer

Assistant Executive Engineer
Yelahanka Sub Division
Bangalore-64

Executive Engineer
Yelahanka Division
Bangalore-64

Administrative Approval

Accorded For ..... 25.00 lakhs
Head of A/C..... P-1771
CER NO :..... 10A Dt:.. 01.01.16

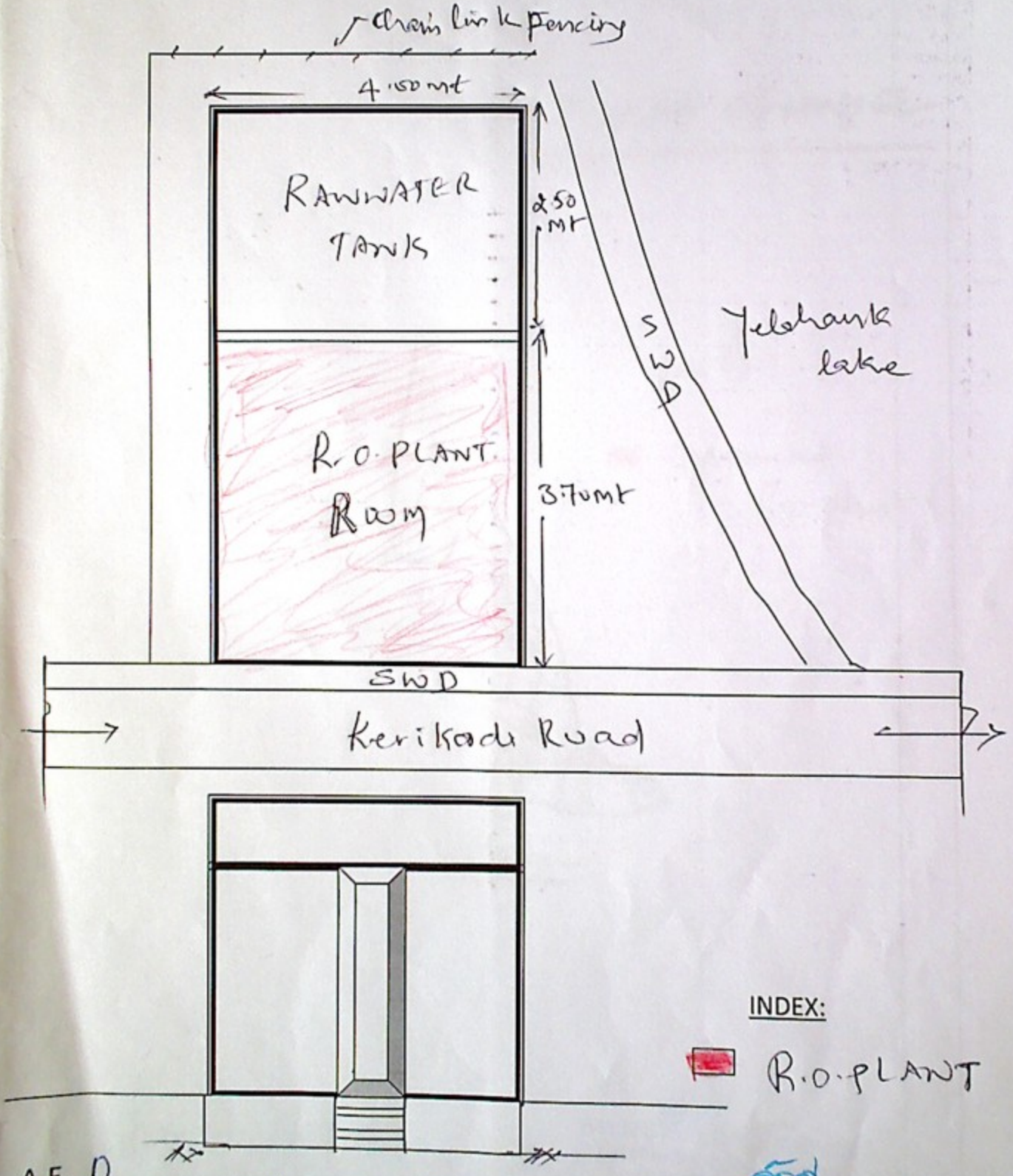
TA CE (YNK)

Technical Sanction

Accorded For ..... 25.00 lakhs
Head of A/C..... P-1771
CER NO :..... 96 Dt:.. 01.01.16

TA CE (YNK)

NAME OF WORK : Construction of RO Plant at yelahanka old town area in ward No- 02 of yelahanka Sub Division.



A.E. Ramaraju AE

A.E.E.
Asst. Executive Engineer
Yelahanka Sub. Division
(BBMP Ynk. Zn)
Yelahanka, Bangalore